

REMARKS

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Office Action and prior art relied upon have been carefully considered. In an effort to expedite the prosecution, the claims have been amended to more clearly define the invention.

The objections to claims 1 and 3 as stated on page 2 of the Office Action have been corrected in the foregoing amendment.

Claims 1-8 were rejected under 35 USC § 103(a) as unpatentable over Terai (NPL) in view of Bureau (US 5,437,195)

This invention discloses a method of fabricating a strain sensor by irradiating a polymer to change its electrical properties. The irradiation intensity is kept below 10^{15} cm^{-2} . This ensures that the irradiated area is not conducting but is in the semiconductor range. See page 9 lines 16 - 22. This why in the claimed invention conducting tracks are additionally deposited.

The discovery on which this invention is partly based is that in this conductance range the response to strains and stress gives a measurable electrical signal that is linear with increasing strain. See page p 9 line 26 to p 10 line 8.

Prior art

Patent 5437195 (Bureau) discloses that strain sensors can be produced by irradiation but the radiation used is above 10^{16} cm^{-2} which produces an electrically conductive material. In this regard, see col 3 lines 9-22 and figure 2 and also col 3 line 62 to col 4 line 4. There is no suggestion in this patent that radiation below this intensity will produce useful strain measurement characteristics.

The paper by Terai et al uses irradiation within the range claimed in this invention but there is no suggestion that this results in properties that make the film useful in measuring strain.

Without the suggestion that useful strain measurements can be had from polymers irradiated below 10^{15} cm⁻² the skilled reader would see no advantage in using a lower radiation intensity than that disclosed by Bureau.

In *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984), the Court mandated:

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so. (Emphasis in the original).

In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Director is hereby authorized to charge any fees, or credit any overpayment, associated with this communication, including any extension fees, to CBLH Deposit Account No. 22-0185, under Order No. 21854-00075-US1 from which the undersigned is authorized to draw.

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Respectfully submitted,

Electronic signature: /Morris Liss/
Morris Liss

Registration No.: 24,510
CONNOLLY BOVE LODGE & HUTZ LLP
1875 Eye Street, NW
Suite 1100
Washington, DC 20006
(202) 331-7111
(202) 293-6229 (Fax)
Attorney for Applicant